

CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
Length		
inch (in.)	2.54	centimeter
inch (in.)	25.4	millimeter
foot (ft)	0.3048	meter
mile (mi)	1.609	kilometer
mile, nautical (nmi)	1.852	kilometer
yard (yd)	0.9144	meter
Area		
acre	4,047	square meter
acre	0.4047	hectare
acre	0.4047	square hectometer
acre	0.004047	square kilometer
square foot (ft ²)	929.0	square centimeter
square foot (ft ²)	0.09290	square meter
square inch (in ²)	6.452	square centimeter
section (640 acres or 1 square mile)	259.0	square hectometer
square mile (mi ²)	259.0	hectare
square mile (mi ²)	2.590	square kilometer
Volume		
barrel (bbl), (petroleum, 1 barrel = 42 gal)	0.1590	cubic meter
ounce, fluid (fl. oz)	0.02957	liter
pint (pt)	0.4732	liter
quart (qt)	0.9464	liter
gallon (gal)	3.785	liter
gallon (gal)	0.003785	cubic meter
gallon (gal)	3.785	cubic decimeter
million gallons (Mgal)	3,785	cubic meter
cubic inch (in ³)	16.39	cubic centimeter
cubic inch (in ³)	0.01639	cubic decimeter
cubic inch (in ³)	0.01639	liter
cubic foot (ft ³)	28.32	cubic decimeter
cubic foot (ft ³)	0.02832	cubic meter
cubic yard (yd ³)	0.7646	cubic meter
cubic mile (mi ³)	4.168	cubic kilometer
acre-foot (acre-ft)	1,233	cubic meter
acre-foot (acre-ft)	0.001233	cubic hectometer
Flow rate		
acre-foot per day (acre-ft/d)	0.01427	cubic meter per second
acre-foot per year (acre-ft/yr)	1,233	cubic meter per year
acre-foot per year (acre-ft/yr)	0.001233	cubic hectometer per year
foot per second (ft/s)	0.3048	meter per second
foot per minute (ft/min)	0.3048	meter per minute
foot per hour (ft/hr)	0.3048	meter per hour
foot per day (ft/d)	0.3048	meter per day

Multiply	By	To obtain
foot per year (ft/yr)	0.3048	meter per year
cubic foot per second (ft ³ /s)	0.02832	cubic meter per second
cubic foot per second per square mile [(ft ³ /s)/mi ²]	0.01093	cubic meter per second per square kilometer
cubic foot per day (ft ³ /d)	0.02832	cubic meter per day
gallon per minute (gal/min)	0.06309	liter per second
gallon per day (gal/d)	0.003785	cubic meter per day
gallon per day per square mile [(gal/d)/mi ²]	0.001461	cubic meter per day per square kilometer
million gallons per day (Mgal/d)	0.04381	cubic meter per second
million gallons per day per square mile [(Mgal/d)/mi ²]	1,461	cubic meter per day per square kilometer
inch per hour (in/h)	0.0254	meter per hour
inch per year (in/yr)	25.4	millimeter per year
mile per hour (mi/h)	1.609	kilometer per hour
Mass		
ounce, avoirdupois (oz)	28.35	gram
pound, avoirdupois (lb)	0.4536	kilogram
ton, short (2,000 lb)	0.9072	megagram
ton, long (2,240 lb)	1.016	megagram
ton per day (ton/d)	0.9072	metric ton per day
ton per day (ton/d)	0.9072	megagram per day
ton per day per square mile [(ton/d)/mi ²]	0.3503	megagram per day per square kilometer
ton per year (ton/yr)	0.9072	megagram per year
ton per year (ton/yr)	0.9072	metric ton per year
Pressure		
atmosphere, standard (atm)	101.3	kilopascal
bar	100	kilopascal
inch of mercury at 60 °F (in Hg)	3.377	kilopascal
pound-force per square inch (lbf/in ²)	6.895	kilopascal
pound per square foot (lb/ft ²)	0.04788	kilopascal
pound per square inch (lb/in ²)	6.895	kilopascal
Density		
pound per cubic foot (lb/ft ³)	16.02	kilogram per cubic meter
pound per cubic foot (lb/ft ³)	0.01602	gram per cubic centimeter
Energy		
kilowatthour (kWh)	3,600,000	joule
Radioactivity		
picocurie per liter (pCi/L)	0.037	becquerel per liter
Specific capacity		
gallon per minute per foot [(gal/min)/ft])	0.2070	liter per second per meter

Multiply	By	To obtain
Hydraulic conductivity		
foot per day (ft/d)	0.3048	meter per day
Hydraulic gradient		
foot per mile (ft/mi)	0.1894	meter per kilometer
Transmissivity*		
foot squared per day (ft ² /d)	0.09290	meter squared per day
Application rate		
pounds per acre per year [(lb/acre)/yr]	1.121	kilograms per hectare per year
Leakage		
foot per day per foot [(ft/d)/ft]	1	meter per day per meter
inch per year per foot [(in/yr)/ft]	83.33	millimeter per year per meter

Temperature in degrees Celsius (°C) may be converted to degrees Fahrenheit (°F) as follows:

$$^{\circ}\text{F} = (1.8 \times ^{\circ}\text{C}) + 32$$

Temperature in degrees Fahrenheit (°F) may be converted to degrees Celsius (°C) as follows:

$$^{\circ}\text{C} = (^{\circ}\text{F} - 32) / 1.8$$

Sea level: In this report, "sea level" refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)—a geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.

Altitude, as used in this report, refers to distance above or below sea level.

***Transmissivity:** The standard unit for transmissivity is cubic foot per day per square foot times foot of aquifer thickness [(ft³/d)/ft²]ft. In this report, the mathematically reduced form, foot squared per day (ft²/d), is used for convenience.

Specific conductance is given in microsiemens per centimeter at 25 degrees Celsius ($\mu\text{S}/\text{cm}$ at 25 °C).

Concentrations of chemical constituents in water are given either in milligrams per liter (mg/L) or micrograms per liter ($\mu\text{g}/\text{L}$).

NOTE TO USGS USERS: Use of hectare (ha) as an alternative name for square hectometer (hm^2) is restricted to the measurement of small land or water areas. Use of liter (L) as a special name for cubic decimeter (dm^3) is restricted to the measurement of liquids and gases. No prefix other than milli should be used with liter. Metric ton (t) as a name for megagram (Mg) should be restricted to commercial usage, and no prefixes should be used with it.